

# Work Order ID 52456



Page 1

Friday, September 25, 2009 8:57:03 AM

Item ID: D212-664-201

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Aft

Start Date: 9/25/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/12/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

*PL*

Date:

*09-24*

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start



Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D212-664-241

Rev C

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D212-664-201 CHG003

*S 02/10/04**for BG 09/11/04*

110

0.00



Pick Kit

Packaging

Packaging

Memo

0.00

Packaging

*9/11/04 SP*

120

0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D212-664-241 using CNC bender program 212-af and Folio FT007

*(IX)**MB 09-10-13*

**Work Order ID 52456**

Friday, September 25, 2009 8:57:03 AM

Page 2

Item ID: D212-664-201

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Start Date: 9/25/2009 Start Qty: 1.00

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Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



QC

Quality Control

QC15- Crosstube Dimensional Check

0.00

=&gt; 8 09/10/13

0.00

Memo



140



Crosstubes

Crosstubes

Crosstubes

0.00

0.00

Memo

1-Drill pilot holes in tube as per Dwg D212-664-241 using drill Jig DT8550 &amp; DT8551

2-Ream hole to finish size in tube as per Dwg D212-664-241 using drill Jig DT8550 &amp; DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Deburr &amp; Inspect for surface damage. Repair damage within limits as per Dwg D212-664-241

4-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-241



MB 09-10-14

**Work Order ID 52456**

Friday, September 25, 2009 8:57:03 AM

Page 3

Item ID: D212-664-201

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Item Name: Crosstube Aft

Start Date: 9/25/2009 Start Qty: 1.00

Required Date: 10/12/2009 Req'd Qty: 1.00

Reference:

Cust Item ID:




Customer:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150  HandFXtube	Crosstubes Chemical Conversion	0.00							
Hand Finishing Crosstubes	Memo Chemical Conversion Coat as within 24 hours of bending and drilling	0.00				(X)	2	MB	29-10-14
160  QC	QC3- Inspect Part Finish	0.00							
Quality Control	Memo	0.00				(X)	1		
170  QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00				(X)	1		




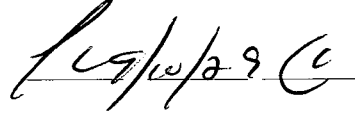


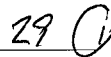
**Work Order ID 52456**

Friday, September 25, 2009 8:57:03 AM

Page 4

Item ID: D212-664-201 Accept  Setup Start   
Revision ID: C Stop   
Item Name: Crosstube Aft  
Start Date: 9/25/2009 Start Qty: 1.00  Cust Item ID:  
Required Date: 10/12/2009 Req'd Qty: 1.00  Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start   
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180  Outsource2 Outsource process - NDT	<b>Memo</b> Liquid Penetrant Inspection as per QSI 038 Issue P/O: <u>10050</u> LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order	0.00  0.00							 09-10-28
190  Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs Packaging <b>Memo</b> Ensure copy of NDT results attached to work order.	0.00  0.00							
200  QC Quality Control	QC5- Inspect part completeness to step on W/O <b>Memo</b> Inspect for damage & ensure results are as per Dwg D212-664-241	0.00  0.00							 09 10 29 

**Work Order ID 52456**

Friday, September 25, 2009 8:57:03 AM

Page 5

Item ID: D212-664-201

Accept

Revision ID: C

Item Name: Crosstube Aft

Start Date: 9/25/2009 Start Qty: 1.00

Required Date: 10/12/2009 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

210



SprayPaint

Spray Painting

Spray Painting per QSI005 4.2

SprayPaint

0.00

Memo

0.00

1-Prime inside and outside crosstube as per QSI 005 4.2  
2-Paint outside crosstube with White Imron as per QSI 005 4.2

PRIME:

Start Time: 6:00

Finish Time: 7:30

PAINT:

Start Time: 11:00

Finish Time: 12:00

PT

09-11-02

220



QC

Quality Control

QC14- Inspect Spray Paint

0.00

Memo

0.00

Then, Wrap in plastic bag to protect from scratches

MA

09-11-02 (1)

# Work Order ID 52456

Friday, September 25, 2009 8:57:03 AM



Page 6

Item ID: D212-664-201

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Aft

Start Date: 9/25/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/12/2009 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230  Crosstubes	Crosstubes	0.00				<u>ml</u>	<u>09</u>	<u>11</u>	<u>03</u> (1)
Crosstubes	<b>Memo</b> 1- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe  2-Install supports with magnobond as per OSI 015 Adhere for for 12 Hrs A/R 6398 Magnobond Batch: <u>112417</u> Expiry Date: <u>01/2011</u>  3-Install clamps as per Dwg D212-664-241. Torque clamps to 80-100 in lb. <u>RT 09-11-04</u>	0.00							
240  QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	<b>Memo</b> 2) Sorulob	0.00				(SL)	/		

**Work Order ID 52456**

Friday, September 25, 2009 8:57:03 AM



Page 7

Item ID: D212-664-201

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Aft

Start Date: 9/25/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/12/2009 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250  Packaging Packaging	Pick Kit  Memo	0.00  0.00							
260  QC Quality Control	QC4- 100% Inspect kits for completeness  Memo	0.00  0.00							
270  Packaging Packaging Packaging	Packaging  Memo Identify and pack for shipping as per PPP D212-664-201	0.00  0.00							

9/26/09 SP

2/8/09/04

① P

Rev E

9/11/09 52

**Work Order ID 52456**

Friday, September 25, 2009 8:57:03 AM

Page 8

Item ID: D212-664-201

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Required Date: 10/12/2009 Req'd Qty: 1.00

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

280

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

09/11/05

H/09-11-5



# Picklist Print

Friday, September 25, 2009 8:57:02 AM

Page 1

4

Work Order ID: 52456

Parent Item: D212-664-201RevC

Parent Item Name: Crosstube Aft

Start Date: 9/25/2009

Required Date: 10/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D212-664- 201TRNRevC		Manufactured	No			110	Each	3.0000	1.0000			



Crosstube Turning Detail



B-52462 MB 09-10-13

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FG

3

46386

1

50991

1

51220

1

D3595-063-530RevA

Manufactured

No

230

Each

208.0000

2.0000



RUBBER CUSHION

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

208

40780

2

44998

2

50030

100

51776

104

ml 091103

# Picklist Print

Friday, September 25, 2009 8:57:02 AM

Work Order ID: 52456



Parent Item: D212-664-201RevC



Parent Item Name: Crosstube Aft



Start Date: 9/25/2009

Required Date: 10/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2940-1RevB  Support		Manufactured	No			230	Each	44.0000	2.0000 			

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	44	
24367	4	
25594	2	
<u>45203</u>	18	
47748	20	

ml 09 11 03

MS21920-28



Purchased

No

230

Each

128.0000

4.0000  


Clamp(per MIL-DTL-8783C)

Warehouse Loc Qty Loc Code

Location

OFFSHORE

FG	5	
105884	5	

Main Warehouse

ST	123	
106864	5	
108466	9	
108847	7	
109181	14	
109965	2	
111281	2	
<u>111734</u>	34	
112624	50	

ml 09 11 03

# Picklist Print

Page 3

Friday, September 25, 2009 8:57:02 AM

Work Order ID: 52456



Parent Item: D212-664-201RevC



Parent Item Name: Crosstube Aft

Start Date: 9/25/2009

Required Date: 10/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

D3428-1RevA

Manufactured

No

250

Each

29.0000

1.0000



Placard

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST096

29

50790

29

9/1/14 SP

MS21042L6

Purchased

No

250

Each

697.0000

6.0000



Nut

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

697

105077

22

110002

5

111548

70

111578

400

112492

200

1x50

9/1/14 SP

AN960JD616

Purchased

No

250

Each

538.0000

18.0000



Washer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

538

112314

538

6x50

9/1/14 SP

18x50

Friday, September 25, 2009 8:57:02 AM

Shop Packet Print

Page 3

# Picklist Print

Page 4

Friday, September 25, 2009 8:57:02 AM

Work Order ID: 52456



Parent Item: D212-664-201RevC



Parent Item Name: Crosstube Aft

Start Date: 9/25/2009

Required Date: 10/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN6-40A 		Purchased	No			250	Each	66.0000	4.0000		9/26/09	SD
Bolt												

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST	66	
112612	16	
112679	50	

4x SD

AN6-41A

Purchased

No

250

Each

49.0000

2.0000



9/26/09

SD

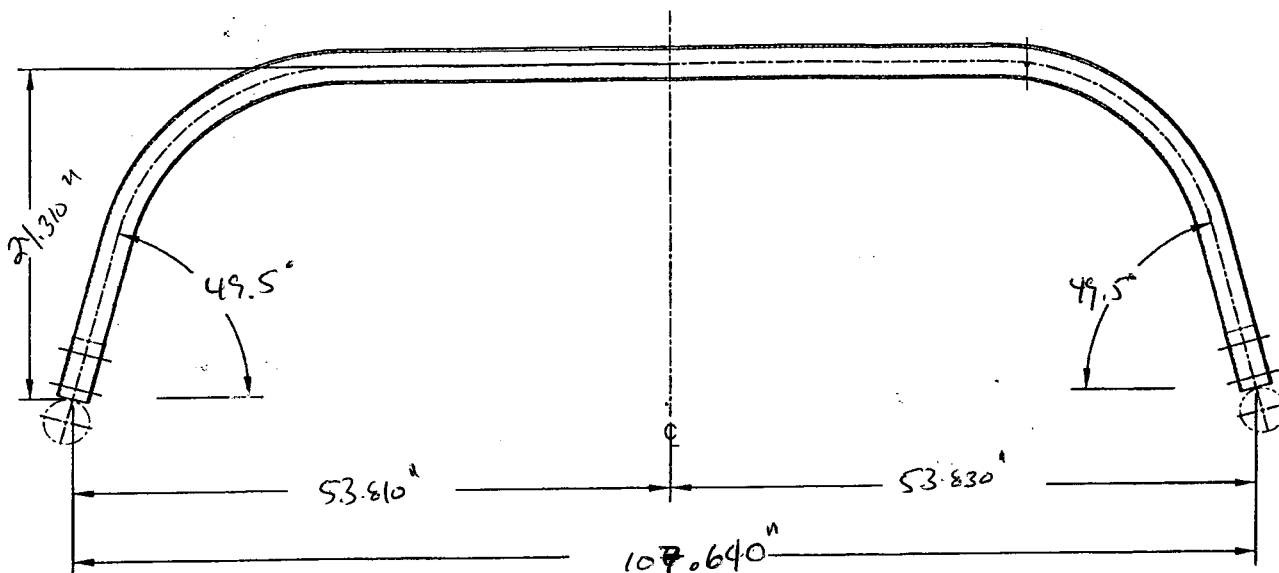
(R)

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST	49	
111605	29	
112489	20	

2x SD

DART AEROSPACE LTD		Work Order:	52456
Description: Crosstube High Aft (205/212)		Part Number:	D212-664-201
Inspection Dwg: D212-664-241 Rev: C		Page 1 of 1	

Required Dimension	Min	Max
Height	24.17	24.43
1/2 Span	53.59	53.85
Angle	49	52
Total Span	107.18	107.70



Comments

QC15 Inspection	8
Date	09/10/13

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	07.05.08	Dimensions updated per Dwg rev. C	KJ/JLM	

**DART****RELEASED**  
07.04.24  
PER ECN 885**DEO ATTACHED**

DESIGN <i>PH</i>	DRAWN BY <i>PH</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>J</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D212-664-241	REV. C SHEET 1 OF 3
DATE 07.03.08		TITLE CROSSTUBE ASS'Y (205/212 HI AFT) NTS	
A	00.12.12	NEW ISSUE	
B	05.02.04	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	
C	07.03.08	REMOVE -1009 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS	

Qty	Part Number	Description
X	D212-664-241	CROSSTUBE ASSEMBLY (205/212 HIGH AFT)
1	D6006-129	CROSSTUBE
2	D2940-1	SUPPORT
4	D3595-063-530	RUBBER CUSHION
4	MS21920-28	CLAMP (OR MS21920-30)
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947- 100, TYPE II, CLASS 2 ADHESIVE)

**GENERAL NOTES:**

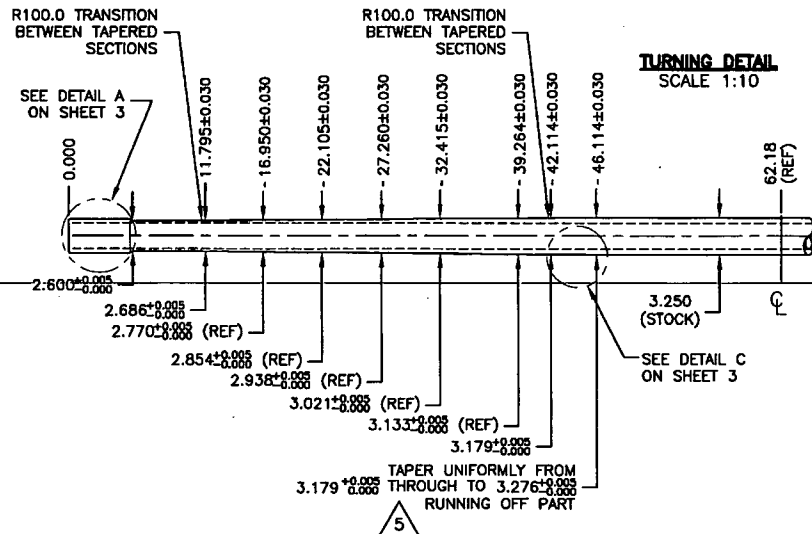
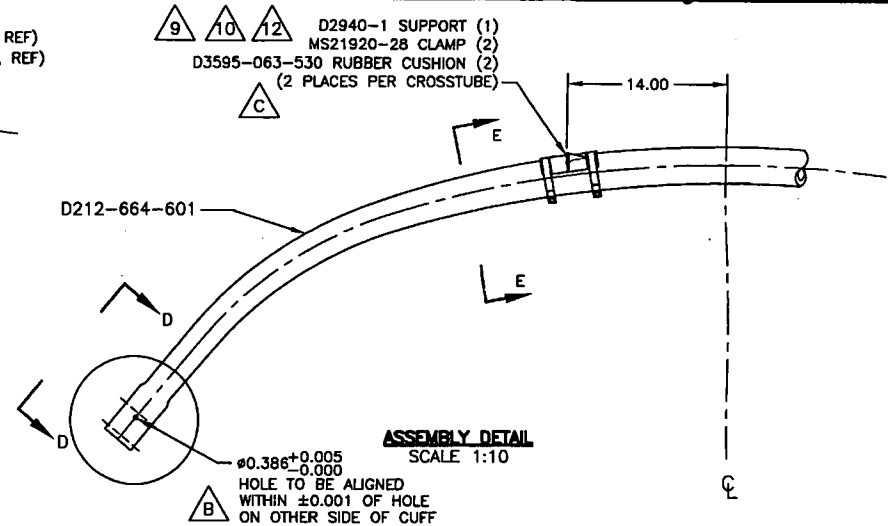
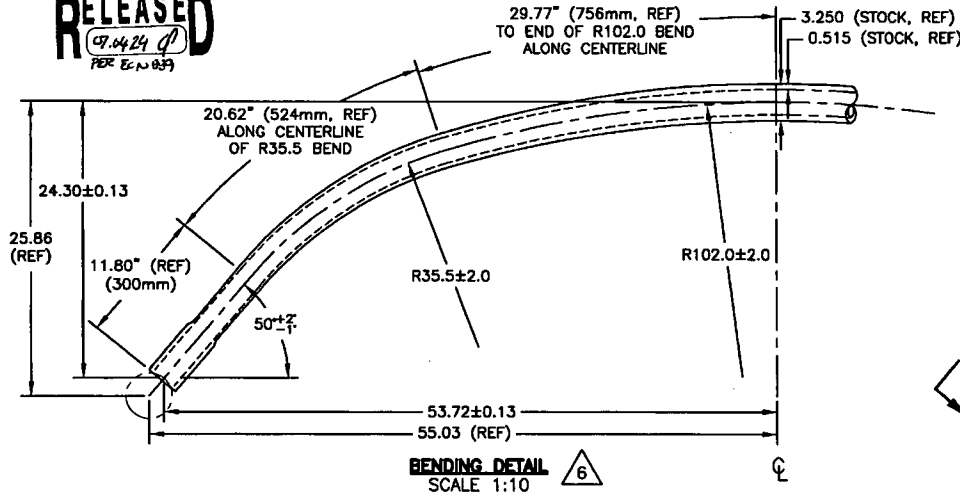
- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) MATERIAL: MANUFACTURED FROM D6006-129  
FINISHED LENGTH =  $124.36 \pm 0.020$
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 5 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2940-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 10) INSTALL MS21920-28 CLAMPS WITH D3595-063-530 RUBBER CUSHIONS TO SECURE D2940-1 SUPPORT ON TOP SIDE OF CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT  
**NOTE:** MS21920-30 CLAMPS CAN BE USED TO ACCOMMODATE VARYING DIAMETERS. ENSURE THERE IS A MINIMUM OF 1.5 THREADS IN SAFETY ON THE NUTS.
- 11) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

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RETURN TO  
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UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 52456

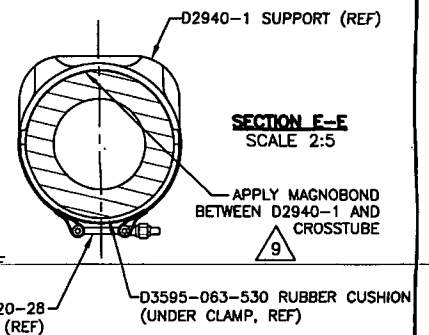
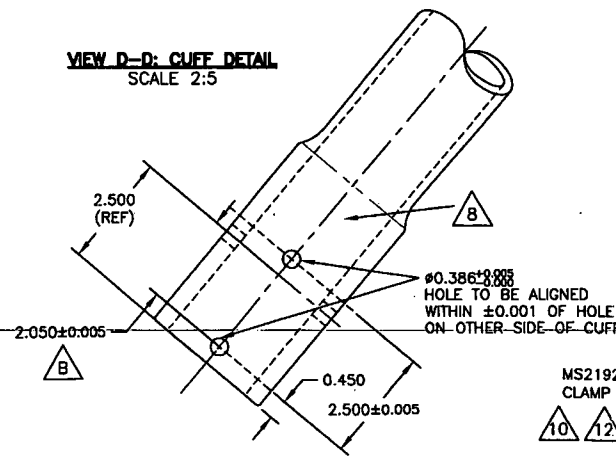
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**RELEASED**  
09.04.24  
PER E.N. 039



**VIEW D-D: CUFF DETAIL**  
SCALE 2:5



**DEO ATTACHED**

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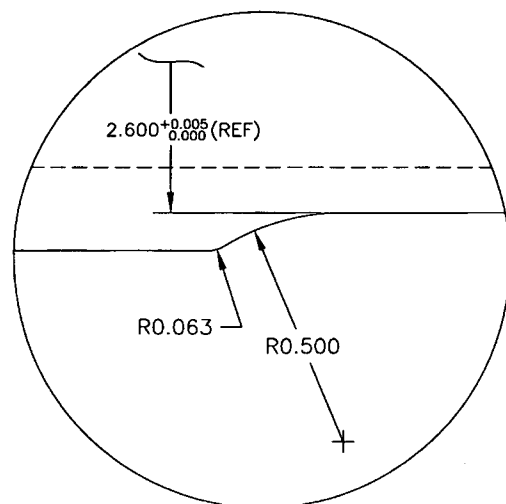
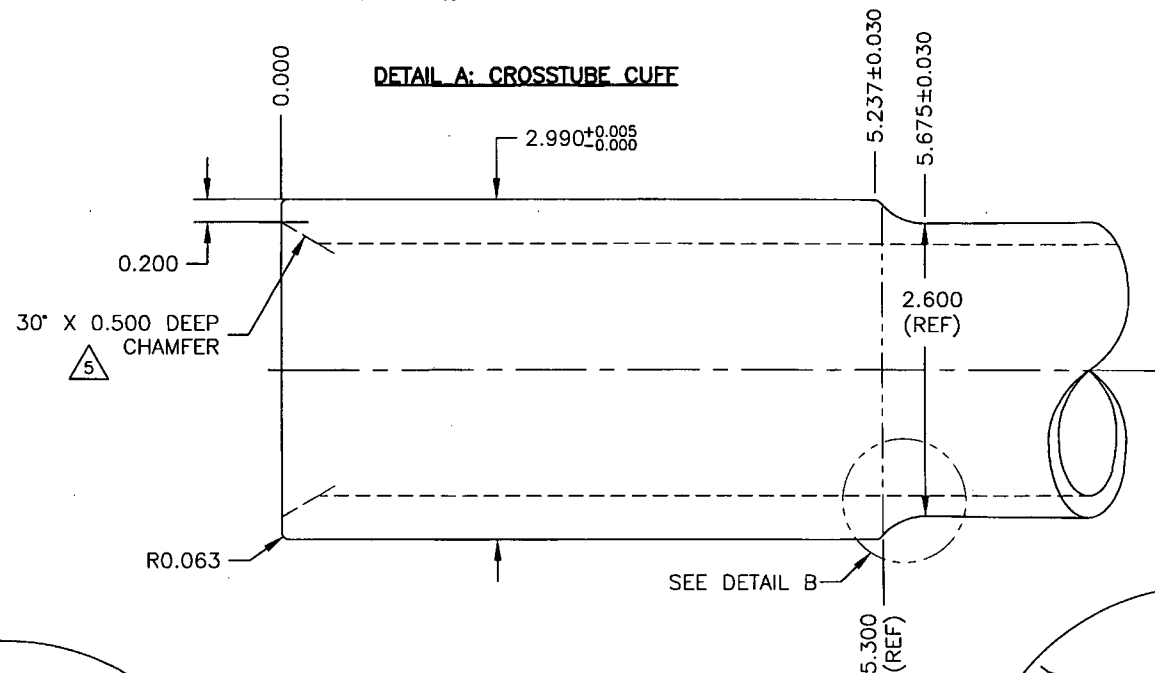
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DESIGN	PH	DRAWN BY	PH	<b>DART</b>	DART AEROSPACE LTD. WINDSOR, ONTARIO, CANADA
CHECKED	J	APPROVED	A	DRAWING NO.	D212-664-241
DATE	07.03.08	TITLE	CROSSTUBE ASS'Y (205/212 HI AFT)	SHEET 2 OF 3	REV. C
				SCALE	1:10

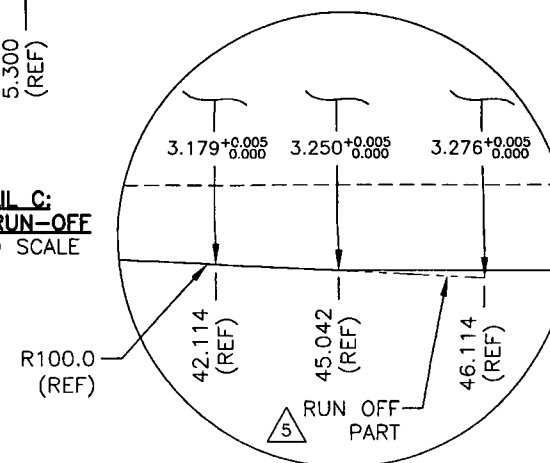
W/O 52454

**RELEASED**  
 570424  
 PER ECN 889

**DEO ATTACHED**



**DETAIL C: TAPER RUN-OFF**  
 NOT TO SCALE



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DESIGN

PH

DRAWN BY

PH

**DART**

DART AEROSPACE LTD.  
 HAWKESBURY, ONTARIO, CANADA

CHECKED

PH

APPROVED

PH

DRAWING NO.

D212-664-241

REV. C

SHEET 3 OF 3

DATE

07.03.08

TITLE

CROSSTUBE ASS'Y (205/212 HI AFT)

SCALE

1:1



W/O 52456

DRAWING NO. D212-664-241	TITLE CROSSTUBE	REV. C	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D212-664-241-C-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN 41	CHECKED Rt	MFG. APPR. E	APPROVED MD		DE APPR. H		
DATE 09.05.01	DATE 09.06.15	DATE 09.06.15	DATE 09/06/16		DATE 09/06/16		

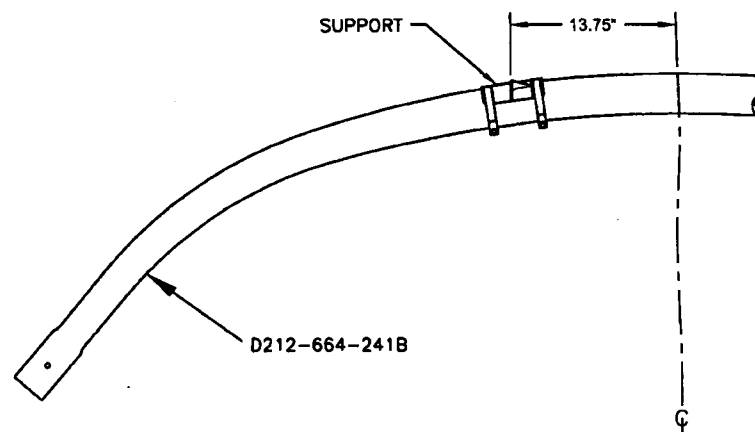
**CHANGE:**

ADD THE FOLLOWING CROSSTUBE ASSEMBLY:

Part Number	Description
D212-664-241B	CROSSTUBE ASSEMBLY (214 HIGH AFT)

THE D212-664-241B CROSSTUBE HAS THE SAME PARTS LIST AS THE D212-664-241 CROSSTUBE. HOWEVER, INSTALL THE SUPPORTS AS SHOWN IN FIGURE 1 OF THIS ENGINEERING ORDER. THE NEW KIT IS OTHERWISE ASSEMBLED PER THE D212-664-241 CROSSTUBE.

**RELEASED**  
09/06/22 JAD



**FIGURE 1 - SUPPORT INSTALLATION**



## LIQUID PENETRANT TEST REPORT

P- 15030

PAGE 1 OF 1

ION Dart Aerospace DATE Oct 28<sup>th</sup> 09 TIME AM ☐ PM ☐  
SS Linda Lacelle ACUREN JOB NO. 188-09-1626  
1270 Aberdeen St. POWO No. 10655  
Hawkesbury WORK LOCATION Hawkesbury  
ACCEPTANCE STD. ASTM 1417/031-038 REV./DATE 2005  
X-Tubes D212-664-201, D212-664-107, D212-664-101 - D206-667-103  
EXAMINED Sob #'s 51068, 51069, 52218, 52454, 52455, 52456, 52539, 52540

DESCRIPTION PROCEDURE No. LT-000 REV./DATE 07 TECHNIQUE No. LT-TEC# 07 REV./DATE 07  
O. D212-664-201, D212-664-107, D212-664-101 MATERIAL ALODINED ALUM. THICKNESS 0.0045  
WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT  
ON 100% EXTERNAL SURFACE

DETAILS  
☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED  
BRAND MAGNAFLUX BLACK LIGHT S/N 8178 ☒ OUTPUT > 1000  $\mu$ W/cm<sup>2</sup> ☐ AMBIENT < 2 fc  
TANT ZL67 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☒ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE  
TANT REMOVER H<sub>2</sub>O MINIMUM DRY TIME >10 MIN. OTHER CAL SUNCOR  
OPER SKDS2 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N 091029 CAL DUE DATE DEC 09  
OPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

SURFACE  
E CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL  
E TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/50°F ☒ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F  
TS- ☐ METRIC ☐ IMPERIAL

WET FLOURESCENT LIQUID  
PENETRANT INSPECTION  
CARRIED OUT ON 100%  
EXTERNAL SURFACE ON X-TUBES  
52540: ACCEPTABLE  
Sob #'s 51068: ACCEPTABLE  
51069: ACCEPTABLE  
52218: ACCEPTABLE  
52454: ACCEPTABLE  
52455: ACCEPTABLE  
52456: ACCEPTABLE  
52539: ACCEPTABLE

09 10 29

services  
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criptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as  
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er information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.  
of Care  
ing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or  
made or intended by Acuren Group Inc.

TURES  
REPRESENTATIVE Chantal Lacelle Frederick Chagnon DTR # E-27155  
ICIAN (SIGNATURE): Frederick Chagnon REPORT REVIEWED BY: Frederick Chagnon  
(PRINT): FREDERICK CHAGNON NAME INITIALS  
1<sup>st</sup> TECHNICIAN 2<sup>nd</sup> TECHNICIAN  
CGSB LEVEL II SNT LEVEL II CGSB LEVEL II SNT LEVEL II  
CGSB REG. No 10560 CGSB REG. No 10560